AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claims 1-38 (canceled)

39. (new) A control system comprising:

an input module structured to respond to a condition by transmitting a representative signal; and

an output module operably coupled to the input module, the output module including firmware configurable with at least one of a first reflex function and a second reflex function, the first reflex function being structured to produce a state signal in response to receiving the representative signal from the input module.

40. (new) A control system as defined in claim 39, wherein:

the first reflex function comprises at least one of a Boolean logic function, a comparison function, a counter function, a timer function, and an edge detection function; and

the second reflex function comprises at least one of the Boolean logic function, the comparison function, the counter function, the timer function, and the edge detection function, wherein the first reflex function is different than the second reflex function.

41. (new) A control system as defined in claim 39, further comprising a computer based tool to configure the firmware with one of the first reflex function and the second reflex function.

42. (new) A control system as defined in claim 39, wherein the output module is coupled to the input module by a bus.

43. (new) A control system as defined in claim 42, wherein the bus utilizes a CANopen protocol.

44. (new) A control system as defined in claim 39, wherein the output module is coupled to the input module by a network.

45. (new) A control system as defined in claim 44, wherein the network utilizes a CANopen protocol.

46. (new) A control system as defined in claim 39, further comprising a master scanner operatively coupled to the input module and the output module.

47. (new) A control system as defined in claim 46, wherein the master scanner comprises a programmable logic controller.

48. (new) A control system as defined in claim 46, wherein the master scanner comprises a field bus coupler.

49. (new) A control system as defined in claim 39, wherein the first reflex function is specified in an object dictionary.

50. (new) A control system as defined in claim 49, wherein the object dictionary is embedded within a master scanner.

51. (new) A control system as defined in claim 39, wherein a first network address is assigned to the input module and a second network address is assigned to the output module.

52. (new) A control system comprising:

an input module structured to respond to a condition by transmitting a representative signal; and

an output module operably coupled to the input module, the output module including a reflex function structured to produce a state signal in response to receiving the representative signal from the input module, the output module being structured to execute the reflex function without utilizing a controller.

53. (new) A control system as defined in claim 52, further comprising the controller operably coupled to the input module and the output module.

54. (new) A control system as defined in claim 53, further comprising a configuration tool operably coupled to the output module, the configuration tool being structured to configure the reflex function.

55. (new) A control system as defined in claim 54, wherein the configuration tool is structured to configure the reflex function by programming firmware associated with the output module.

56. (new) A control system as defined in claim 52, wherein the reflex function comprises at least one of a Boolean logic function, a comparison function, a counter function, a timer function, and an edge detection function.

57. (new) A control system as defined in claim 52, wherein the output module is coupled to the input module by a network.

58. (new) A control system as defined in claim 57, wherein the network utilizes a CANopen protocol.

59. (new) A control system as defined in claim 52, wherein the first reflex function is specified in an object dictionary.

60. (new) A control system as defined in claim 59, wherein the object dictionary is embedded within a master scanner.

61. (new) A control system as defined in claim 52, wherein a first network address is assigned to the input module and a second network address is assigned to the output module.